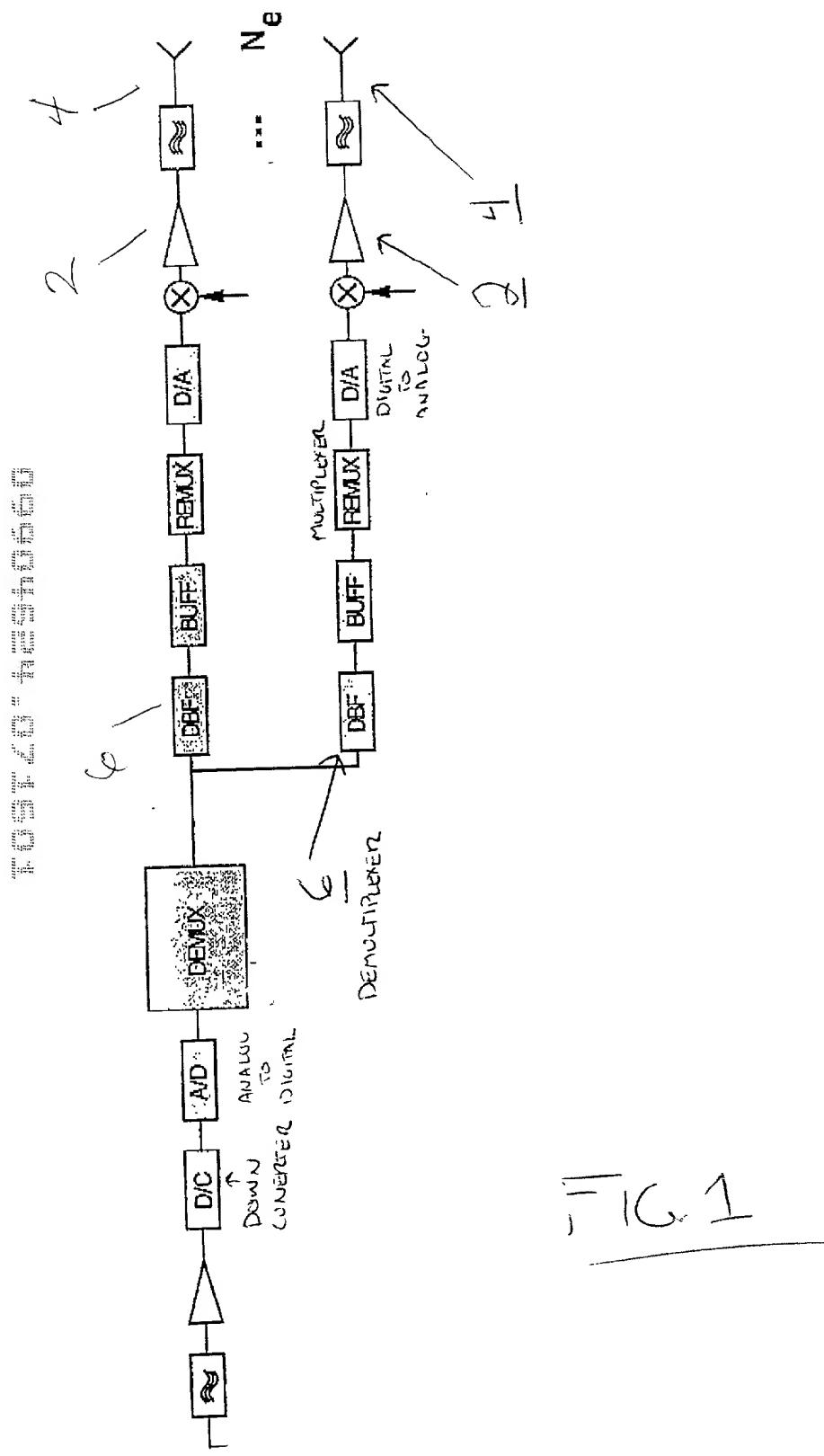


Title SMALLER APERTURE ANTENNA FOR MULTIPLE SPOT BEAM SATELLITES

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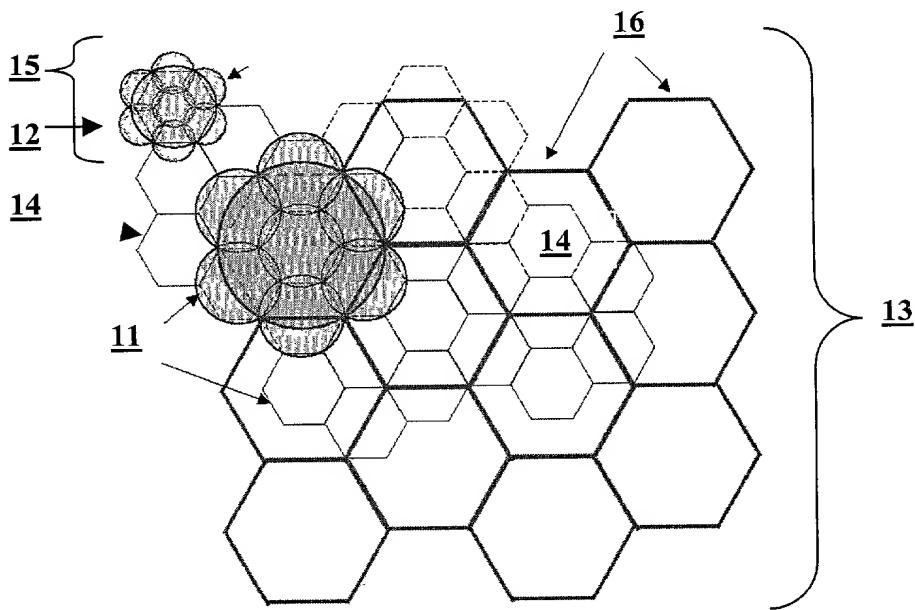


Fig. 2A

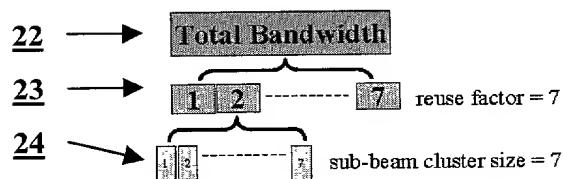
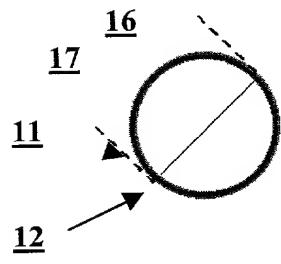
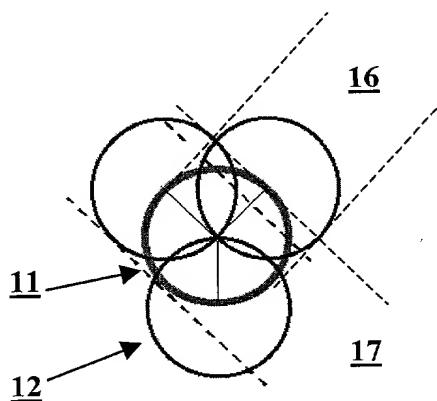


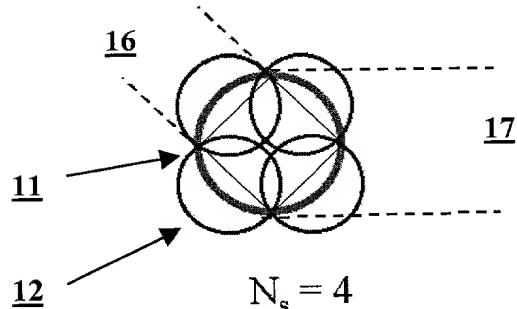
Fig. 2B



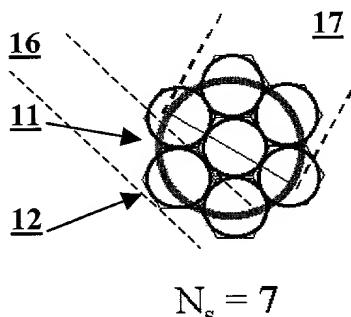
$N_s = 1$



$N_s = 3$



$N_s = 4$



$N_s = 7$

Fig. 3

Comparison of Normalized Sub-Beam and Basic Beam Patterns

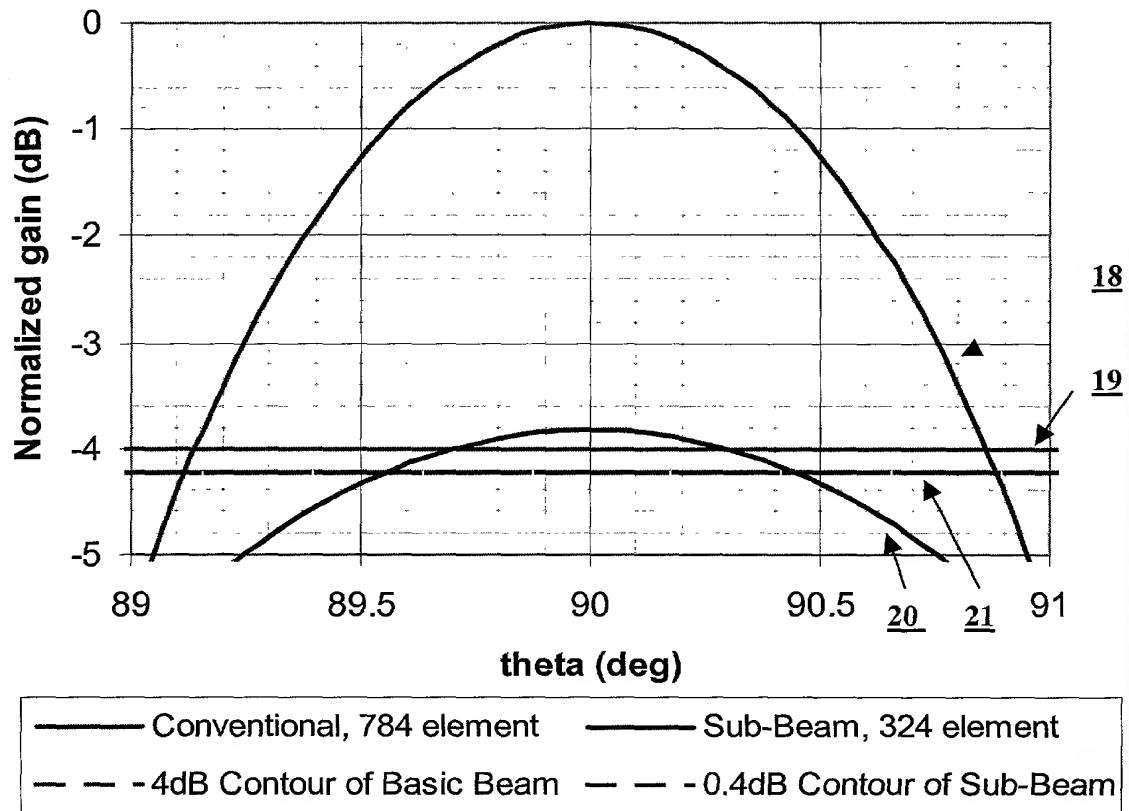


Fig. 4

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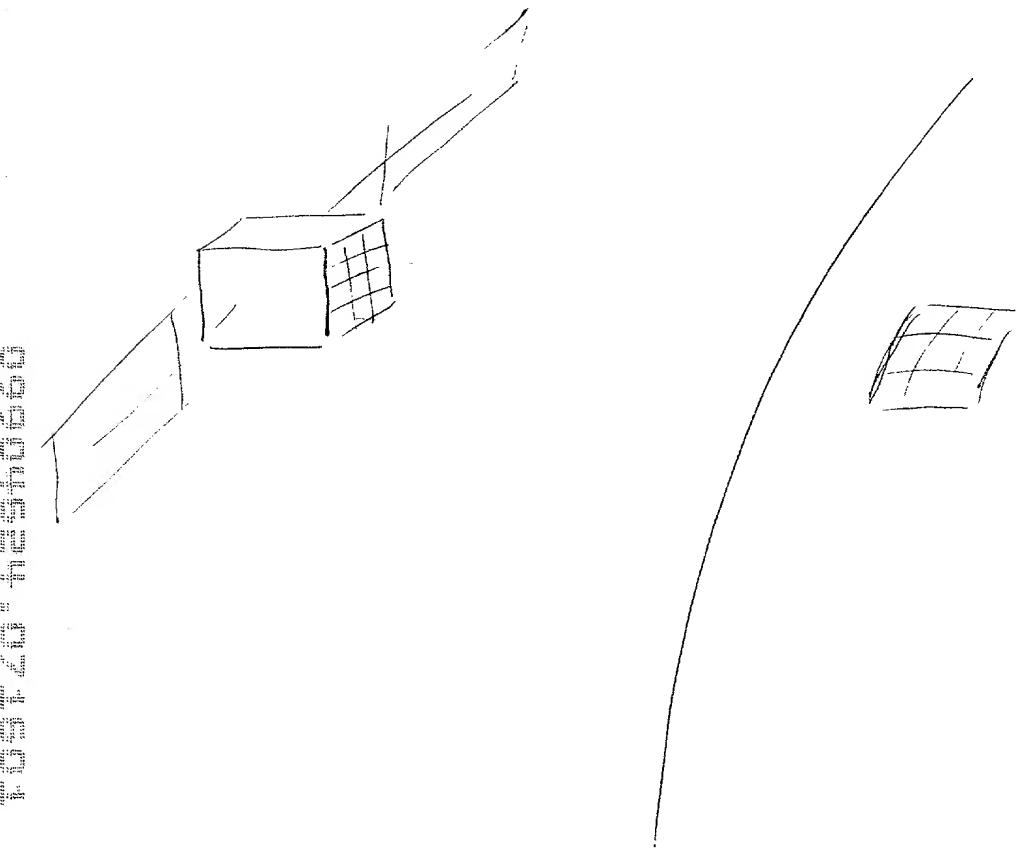


FIG 5